

application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments

In the Claims:

Please amend the claims as follows:

Please substitute the following claim 50 for currently pending claim 50:

50. (Once amended) A composition comprising:

(a) a non-natural molecular scaffold comprising:

- (i) a virus-like particle; and
- (ii) an organizer comprising at least one first attachment site,

wherein said organizer is a polypeptide or residue thereof and is connected to said virus-like particle by at least one covalent bond; and

(b) an antigen or antigenic determinant with at least one second attachment site, said second attachment site being selected from the group consisting of:

- (i) an attachment site not naturally occurring with said antigen or antigenic determinant; and

- (ii) an attachment site naturally occurring with said antigen or antigenic determinant,

wherein said second attachment site is a polypeptide or residue thereof and is bound by at least one non-peptide bond to said first attachment site;

wherein said antigen or antigenic determinant and said scaffold interact through said association to form an ordered and repetitive antigen array.


Amend
~~Please substitute the following claim 51 for currently pending claim 51:~~

51. (Once amended) The composition of claim 50, wherein said virus-like particle is a hepatitis B virus capsid protein.

Please substitute the following claim 54 for currently pending claim 54:

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~~54.~~ (New) The composition of claim 50, wherein said virus-like particle is selected from the group consisting of:

- (a) recombinant proteins of Rotavirus;
- (b) recombinant proteins of Norwalk virus;
- (c) recombinant proteins of Alphavirus;
- (d) recombinant proteins of Foot and Mouth Disease virus;
- (e) recombinant proteins of Retrovirus;
- (f) recombinant proteins of Hepatitis B virus;
- (g) recombinant proteins of Tobacco mosaic virus;


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- (h) recombinant proteins of Flock House Virus; and
 - (i) recombinant proteins of human Papillomavirus.
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Please substitute the following claim 57 for currently pending claim 57:

57. (Once amended) A vaccine composition comprising:

- (a) a non-natural molecular scaffold comprising:
 - (i) a virus-like particle; and
 - (ii) an organizer comprising at least one first attachment site,

wherein said organizer is a polypeptide or residue thereof and is connected to said virus-like particle by at least one covalent bond;

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- (b) an antigen or antigenic determinant with at least one second attachment site,

said second attachment site being selected from the group consisting of:

- (i) an attachment site not naturally occurring with said antigen or antigenic determinant; and
- (ii) an attachment site naturally occurring with said antigen or antigenic determinant,

wherein said second attachment site is a polypeptide or residue thereof and is bound by at least one non-peptide bond to said first attachment site;

wherein said antigen or antigenic determinant and said scaffold interact through said association to form an ordered and repetitive antigen array; and

- (c) a pharmaceutically acceptable carrier.
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Please substitute the following claim 58 for currently pending claim 58:

58. (Once amended) The vaccine composition of claim 57, wherein said virus-like
particle comprises a Hepatitis B virus-like particle.
